



BaCell 3D – Building advanced multiCellular systems in 3D



- Organoid technologies
- Organ-on-a-chip and microphysiological systems
- Recapitulating development & regeneration *in vitro*
- Disease modeling and drug discovery
- Personalized medicine

Keynote Speakers:

Nicolas Rivron
IMBA, Vienna BioCenter

Kara McKinley
Harvard University

Confirmed Speakers:

Mohamed Bentires-Alj
Department of Biomedicine, University of Basel, University Hospital Basel

Gray Camp
Roche Institute for Translational Bioengineering (ITB), University of Basel

Urs Jenal
Biozentrum, University of Basel

Prisca Liberali
Friedrich Miescher Institute for Biomedical Research (FMI)

Matthias Lutolf
Roche Institute for Translational Bioengineering (ITB)

Salvatore Piscuoglio
Department of Biomedicine, University of Basel

Magdalena Renner
Institute of Molecular and Clinical Ophthalmology Basel (IOB)

Barbara Treutlein
Department of Biosystems Science and Engineering (D-BSSE), ETH Zurich

Margherita Turco
Friedrich Miescher Institute for Biomedical Research (FMI)

Organizing committee:

Mehmet Girgin, Dehio lab
University of Basel

Philipp Hoppe
Novartis Institutes for BioMedical Research (NIBR)

Magdalena Renner
Institute of Molecular and Clinical Ophthalmology Basel (IOB)

Andrea Manfrin
Roche Institute for Translational Bioengineering (ITB), Roche Neuroscience and Rare Diseases (NRD)

Tiberius Preca, Bentires-Alj lab
Department of Biomedicine, University of Basel

Cornelia Schwyer and Koen Oost, Liberali lab,
Friedrich Miescher Institute for Biomedical Research (FMI)

Raphaëlle Servant, Le Magnen lab
University Hospital Basel, University of Basel

Fides Zenk, Treutlein lab
Department of Biosystems Science and Engineering (D-BSSE), ETH Zurich

Additional talks will be selected from submitted abstracts. Find more information and submit your abstract here: <https://www.fmi.ch/bacell3d/>

Abstract Submission Deadline: 15 April 2022
Registration Deadline: 30 April 2022
Contact: bacell3d@fmi.ch

Venue:

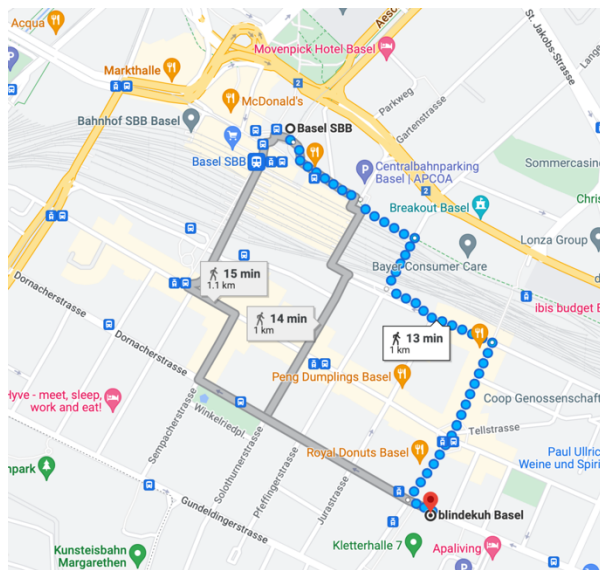
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Dornacherstrasse 192

4053 Basel

<https://goo.gl/maps/VfEvUiMAfmQejDY1A>

10-15 min walk from Basel SBB station



Wednesday, 11th May 2022

8.45 - 9.30	Arrival & registration
9.30 - 9.40	Welcome & introduction
Session 1 - Organoid technologies (chairing by Fides Zenk & Philipp Hoppe)	
9.40 - 10.10	Margherita Turco (FMI) Human endometrial organoids: a window into women's reproductive health
10.10 - 10.25	Stefan Spirig (IOB, Basel) Towards retinal organoids in high-throughput
10.25 - 10.40	Philipp Hoppe (Novartis Institutes for BioMedical Research) Genome-wide screening in human kidney organoids identifies developmental and disease-related aspects of nephrogenesis
10.40 - 11.10	<i>Coffee break</i>
11.10 - 11.40	Salvatore Piscuoglio (Department of Biomedicine, Uni Basel) Augmenting precision oncology using tumor derived 3D Models
11.40 - 11.55	Fátima Sanchís Calleja (D-BSSE, ETH Zurich) Decoding morphogen-induced patterning of developing human brain organoids
11.55 - 13.30	<i>Lunch break</i>
Session 2 - Recapitulating development & regeneration in vitro (chairing by Cornelia Schwayer & Mehmet Girgin)	
13.30 - 14.00	Prisca Liberali (FMI) Mapping the molecular determinants of symmetry breaking in mouse gastruloids
14.00 - 14.15	Rishika Agarwal (Department of Biomedicine, Uni Basel) Human epidermal organoids (HEOs): Establishing a culture system and modelling epidermal diseases
14.15 - 14.30	Paolo Armando Gagliardi (Institute of Cell Biology, Uni Bern) Spatio-temporal Control of ERK Pulse Frequency Coordinates Fate Decisions during Mammary Acinar Morphogenesis
14.30 - 15.00	<i>Coffee break</i>

Program - BaCell 3D conference

15.00 - 15.30	Barbara Treutlein (D-BSSE, ETH Zurich) Tracing and perturbing lineages during human organoid development
15.30 - 15.45	Laura Dönges (Department of Biomedicine, Uni Basel) In vitro model of osteoarthritis inspired by developmental biology
15.45 - 16.45	<u>Keynote lecture:</u> Nicolas Rivron (IMBA, Vienna BioCenter) Blastoid: shaping the mammalian embryo for implantation
16.45 - 18.00	Poster session 1 odd numbers
18.00	<i>Dinner</i>

Thursday, 12th May 2022

9.00 - 9.20	Arrival
9.20 - 9.30	Welcome
Session 3 - Organ-on-a-chip and micro-physiological systems (chairing by Andrea Manfrin & Tiberius Preca)	
9.30 - 10.00	Matthias Lutolf (Roche Institute for Translational Bioengineering (ITB)) Engineering organoid morphogenesis
10.00 - 10.15	Qiutan Yang (FMI) Mechanobiology in intestinal organoid crypt formation
10.15 - 10.30	Andrea Mainardi (UH Basel, Uni Basel, Poli MI) Towards modelling the joint on a chip: a mechanically active microfluidic system designed for engineered 3D multi-layer osteochondral tissues
10.30 - 11.00	<i>Coffee Break</i>
11.00 - 11.15	Hansjoerg Keller (Novartis Institutes for BioMedical Research) 3D bioprinted contractile human skeletal muscle models in microplates for in vitro microphysiological drug profiling

Program - BaCell 3D conference

11.15 - 11.30	Paola Occhetta (Poli MI) uBeat®, a beating organ-on-chip to model the pathophysiology of the heart
11.30 - 12.30	Poster session 2 even numbers
12.30 - 13.30	<i>Lunch break</i>
Session 4 - Disease modeling, drug discovery and personalized medicine (chairing by Raphaëlle Servant, Koen Oost & Magdalena Renner)	
13.30 - 14.00	Maren Diepenbruck (Department for Biomedicine, University Hospital Basel) Drug screening platform for breast cancer organoids
14.00 - 14.30	Gray Camp (Roche Institute for Translational Bioengineering (ITB) & Uni Basel) Charting human development with organoid and single-cell technologies
14.30 - 14.45	Raphaëlle Servant (University Hospital Basel) Establishment and characterization of two novel patient-derived organoid xenograft models of advanced prostate cancer
14.45 - 15.15	<i>Coffee Break</i>
15.15 - 15.45	Urs Jenal (Biozentrum, University Basel) Human airway models to probe lung infections and drug treatment
15.45 - 16.00	Marta Roccio (Head & Neck Surgery USZ/UZH, Zurich) Next-generation inner ear organoids to tackle hearing loss
16.00 – 16.15	<i>Coffee Break</i>
16.15 - 16.30	Maxim Norkin (EPFL, Lausanne) Differentiation therapy in colorectal cancer: application of NGS-based screening in drug discovery
16.30 - 17.30	<u>Keynote lecture:</u> Kara McKinley (Harvard University) Tissue patterning during regeneration and renewal
17.30 - 18.00	Closing remarks
18.00	<i>Apéro & networking</i>